Supreme Court, U.S.
FILED
JAN 25 1999
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No. 98-871

IN THE

Supreme Court of the United States

OCTOBER TERM, 1998

UNITED STATES OF AMERICA,

Petitioner,

v.

HUGHES AIRCRAFT COMPANY,

Respondent.

On Petition for Writ of Certiorari to the
United States Court of Appeals
for the Federal Circuit

BRIEF IN OPPOSITION

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JANUARY 25, 1999

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Pursuant to Rule 29.6, Respondent states that it is a wholly owned subsidiary of General Motors Corporation.

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INTRODUCTION

Just the Term before last, the Court decided a case in which it considered the continuing vitality of the "doctrine of equivalents" in federal patent law. *See Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17 (1997). The Court there unanimously rejected the argument that this doctrine, which was given its modern form in *Graver Tank & Mfg. Co. v. Linde Air Products Co.*, 339 U.S. 605 (1950), has been superseded by later legislative enactments or should be discarded. *See*, 520 U.S. at 24-30; *id.* at 40 ("Today we adhere to the doctrine of equivalents."). Having declined the "invitation" to bury the doctrine, the Court went on to "clarify the proper scope of the doctrine" in several respects. *Id.* at 21. In a comprehensive discussion, it addressed various aspects of the doctrine and how it should be applied in conjunction with related doctrines of patent law. The Court then noted its expectation "that the Federal Circuit will refine the formulation of the test for equivalence in the orderly course of case-by-case determinations," a task left "to that court's sound judgment in this area of its special expertise." *Id.* at 40.

Now, however, just as the Federal Circuit has begun to digest and apply *Warner-Jenkinson* in a handful of new cases, the United States seeks to short-circuit this "orderly" process of "case-by-case determinations" by asking the Court to intervene once again and give its renewed attention to this same niche of patent law. This insistent demand on the Court's limited resources might be justified if there were strong reason to believe that the Federal Circuit was consistently and deliberately ignoring *Warner-Jenkinson*, but that is simply not so. In this case, in the other cases remanded to that court in light of *Warner-Jenkinson*, and in the few other cases that have been decided since, it is clear that the Federal Circuit is faithfully applying and refining the doctrine of equivalents in accordance with the Court's teachings. As the Court said in *Warner-Jenkinson*, there is "no purpose in going further" at this juncture and "micromanaging" the Federal Circuit's attempts to refine the application of that doctrine to the specific facts of

these patent cases. *Id.* That admonition is particularly apt with respect to the proceedings in this case, which have been exhaustively treated by the lower courts; the Federal Circuit having decided the issue of equivalents, correctly, for the third time.

COUNTERSTATEMENT OF THE CASE

Perhaps no case in the annals of patent law has been litigated more thoroughly and laboriously than this one. The invention at issue—a system for controlling the orientation of satellites in space—was conceived in 1959 by Hughes engineer Donald Williams. The patent was applied for in 1960 but did not issue until 1973, after a lengthy battle between Hughes and the Government over ownership of the patent finally ended with the Court's denial of the United States' petition for *certiorari* in *Williams v. NASA*, 463 F.2d 1391 (C.C.P.A. 1972), *cert. denied*, 412 U.S. 950 (1973).

Immediately thereafter, in 1973, Hughes filed this case under 28 U.S.C. § 1498(a), seeking just compensation for the Government's unauthorized use of the Williams invention. Protracted litigation followed, which led ultimately to a judgment entered by the United States Court of Federal Claims in favor of Hughes for $35 million in patent damages and $77 million in delay compensation. *See Hughes Aircraft Co. v. United States*, 31 Fed. Cl. 464 (1994) ("*Hughes XII*").[1] The Government responded with yet more litigation, in a continuing effort to reargue the underlying liability determination. The decision below marks the third time that the Federal Circuit has rejected the Government's arguments on this score.

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[1] The fifteen successive decisions in the *Hughes* litigation will be denoted in short form by Roman numerals in chronological order for ease of reference. Some, but not all, of these decisions have been included in the appendix to the petition for *certiorari*; for those that are included, citation will be made to the decision and also to the relevant pages of the appendix.

A. The Williams Invention.

Despite intensive efforts and huge expenditures by the United States Government to build a successful synchronous communications satellite in the 1950s and 1960s, one was never built until Williams solved the problem of how to control the orientation of a satellite in space. *Hughes Aircraft Co. v. United States*, 717 F.2d 1351, 1352 (Fed. Cir. 1983) ("*Hughes VII*") (Pet. App. 101a). Williams solved the problem by combining: (1) a spin-stabilized satellite having a jet at the periphery of the body that could be rapidly fired (or "pulsed") at selected positions in its spin cycle (known as the instantaneous spin angle or "ISA" position); and (2) a V-beam sun sensor and associated electronics that could collect raw data from the sun and transmit it, thus enabling a ground crew to know the satellite's orientation and ISA position with respect to the sun. *Id.* at 1353 (Pet. App. 101a-102a).

Using the data received from the satellite, the ground crew could formulate and send back commands to control the timing of the jet pulses to achieve the desired orientation of the satellite. *Id.* Importantly, in order to adjust the satellite's orientation using the Williams invention, it is necessary to know the satellite's present orientation with respect to a fixed external coordinate system, such as the sun or a star. *Hughes Aircraft Co. v. United States*, 215 U.S.P.Q. 787, 801 (Ct. Cl. Tr. Div. 1982) ("*Hughes VI*") (Pet. App. 50a-51a). It is also necessary to have a means to communicate commands to the satellite to cause it to fire the jets and change orientation. *Id.* at 803 (Pet. App. 56a). All of the Government's satellites that are claimed to have infringed the Williams patent have these critical abilities. Equally important, these particular features were not present in the art that predated Williams' invention.

B. The Accused Store-and-Execute Satellites.

The Government's accused store-and-execute ("S/E") satellites are identical to the Williams invention in all material

respects save two:

First, the S/E satellites use the same raw data (sun pulses generated by the V-beam sensor) prescribed by Williams to determine ISA position, but they do not transmit all of that information to the ground crew. Instead, the later development of computer technology enabled the S/E satellites to store some of this information in an on-board computer memory for later use in timing the firing of the jet. The remainder of the information is still transmitted to the ground crew for the necessary computations to be made. *Hughes VII*, 717 F.2d at 1360-61 (Pet. App. 117a).

Second, the S/E satellites do not fire the jet instantly upon receiving a command from the ground. In Williams, the command signal to fire occurs in "real time," that is, within a fixed time after receiving the sun pulse from the V-beam sensor when the satellite is in its proper ISA position. In the S/E satellites, the jet-firing signal is likewise timed to occur within a fixed time of receiving the sun pulse from the sensor, but the presence of the on-board computer means that the jet need not be fired immediately after receipt of the initial command. Instead, the satellite can store this command in its computer memory until it receives a second command to fire the jet at a later time. *Id.* at 1361 (Pet. App. 118a).

C. Prosecution of the Williams Patent.

Substantive prosecution of the Williams patent application occurred between 1960 and 1966. The patent examiner rejected Hughes' claims as unpatentable, finding that they were not distinct from a combination of prior art that included a patent to Dr. William B. McLean. *Id.* at 1354 (Pet. App. 104a). McLean described a spin-stabilized, target-seeking vehicle with a jet motor at the periphery of the spinning body. However, unlike Williams' satellite, McLean's space vehicle was effectively a guided missile: it was completely self-guided on a collision course with its selected target. It could not

determine (and did not need to determine) its orientation within a fixed external coordinate system, such as with respect to the sun. Moreover, once set on its course, McLean's space vehicle could not receive any command signals to control its desired orientation. *Hughes VI*, 215 U.S.P.Q. at 800-04 (Pet. App. 48a-60a).

In 1966, Hughes submitted amended claims that included the limitations set forth in paragraphs (e), (f), and (g). *See* Pet. App. 29a (quoting full text of the patent claim). Some, but not all, of the limitations included in these paragraphs were relevant to distinguish the McLean patent. For example, two of the claim limitations literally met by the S/E satellites—requiring a means for providing an indication of ISA position with respect to a fixed external coordinate system and a means for receiving control signals to activate the precession jet—were necessary to distinguish McLean. However, the two limitations not literally met by the S/E satellites—that an indication of the ISA position be sent to an "external location" and that the jets be pulsed "in synchronism" with the control signals—were clearly not necessary to distinguish McLean. Hughes emphasized the former claim elements, not the latter, in its arguments for patentability in the Patent Office. *Hughes VII*, 717 F.2d at 1356 (Pet. App. 105a-106a).

D. The Finding of Infringement Against the Government.

Trial on the issue of whether the S/E satellites infringed the Williams patent occurred in 1976. Hughes conceded that the S/E satellites did not literally infringe the Williams patent, but asserted infringement under the doctrine of equivalents. After delays caused by litigation of other issues, the trial court ruled in 1982 that Hughes' claim was barred by the doctrine of prosecution history estoppel. *Hughes VI*, 215 U.S.P.Q. at 812 (Pet. App. 84a). The trial court concluded that because Hughes had amended its patent application to include the two limitations not literally met by the S/E satellites, Hughes was

estopped to assert infringement by anything but "obvious and exact" equivalents of the Williams invention, which essentially restricted Hughes only to claims of literal infringement. *Id.*[2] The trial court expressly declined to make any inquiry into the reasons why Hughes had included the specific limitations not literally met by the S/E satellites, calling that inquiry "hindsight" and "speculation." *Id.*

The Federal Circuit reversed the trial court's judgment in *Hughes VII*. Noting that it is common practice to amend claims during patent prosecution, the court found no justification for adopting a "wooden" view of prosecution history estoppel that would automatically preclude application of the doctrine of equivalents simply because the claims had been amended during prosecution. 717 F.2d at 1362-63 (Pet. App. 122a). Instead, the court recognized that patent amendments may be of various types and for various purposes. Depending on the nature and purpose of an amendment, its estoppel effect might range "from great to small to zero," and thus the effect in a particular case might or might not be to preclude infringement under the doctrine of equivalents. *Id.* at 1363 (Pet. App. 122a). The Court thus rejected the trial court's sweeping theory of

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[2] The claims of the Williams patent are drafted in "means-plus-function" form as permitted by the 6th paragraph of 35 U.S.C. § 112. Under that provision, "[a]n element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification *and equivalents thereof*." *Id.* (emphasis added). The Federal Circuit has defined "literal" infringement of such claims as occurring when the elements in the accused device identically perform all of the functions set forth in the claims using the same or equivalent structure. *See, e.g., Mas-Hamilton Group v. LaGard, Inc.*, 156 F.3d 1206, 1211-12 (Fed. Cir. 1998). Infringement of such claims occurs under the doctrine of equivalents where the claimed functions are substantially, rather than literally, performed by equivalent structures. *See, e.g., Chiuminatta Concrete Concepts, Inc. v. Cardinal Indus., Inc.*, 145 F.3d 1303, 1310 (Fed. Cir. 1998).

prosecution history estoppel, which effectively eliminated any consideration whatsoever of the doctrine of equivalents, even for elements that may not have been relevant to distinguish the prior art. *Id.* at 1364 (Pet. App. 125a).

The Federal Circuit then applied the correct analysis of the doctrine of equivalents to the undisputed facts. After noting the "striking" similarities between the Williams invention and the S/E satellites, the court focused carefully on the evidence as it pertained to each of the specific claim limitations that were contained in the disputed paragraphs (e), (f), and (g). The court concluded that though the S/E satellites used more modern computer technology, which was unavailable when Williams applied for his patent in 1960, the S/E satellites nevertheless included structure functionally equivalent to the elements of the Williams invention. The Federal Circuit held that the record established that the two devices performed substantially the same functions in the same manner, except for differences dictated by the addition of the more modern computer technology in the S/E satellites. *Id.* at 1364-66 (Pet. App. 124a-130a).

Having thus held that the Government was liable for the unauthorized use of the Williams patent, the Federal Circuit remanded for the trial court to determine the just compensation due to Hughes. *Id.* at 1366 (Pet. App. 130a). A suggestion for rehearing *en banc* was denied.

E. The Accounting Phase.

With liability for infringement established at last, the parties proceeded to litigate the compensation issues. Ultimately, the trial court determined that the Government had repeatedly infringed the Williams patent by its use of 81 satellites that were operated or built during the time that the Williams patent was in force from 1973 to 1990. *See Hughes Aircraft Co. v. United States*, 29 Fed. Cl. 197, 243-48 (1993) (summarizing disposition of all the satellites that are at issue in

the case). For most satellites launched after 1983, the United States conceded infringement under the doctrine of equivalents, based on the *Hughes VII* decision. *Id.* The trial court entered judgment for just compensation based on a 1% royalty and for additional compensation based on the substantial delay in Hughes' receipt of those royalty payments. *See Hughes Aircraft Co. v. United States*, 31 Fed. Cl. 464 (1994); *Hughes Aircraft Co. v. United States*, 31 Fed. Cl. 481 (1994).

F. The Government's Further Efforts to Reargue Liability.

The United States appealed the underlying judgment, asserting that the Federal Circuit's 1987 decision in *Pennwalt Corp. v. Durand-Wayland, Inc.*, 833 F.2d 931 (Fed. Cir. 1987) (en banc), *cert. denied*, 485 U.S. 961(1988), effected a change in the law of the doctrine of equivalents such that the *Hughes VII* decision on infringement should no longer be considered the law of the case. The *Pennwalt* decision had reaffirmed the principle—now known as the "all-elements rule"—that to show patent infringement, "the plaintiff must show the presence of every element or its substantial equivalent in the accused device." *Id.* at 935. Hughes also appealed, contending that the damages were too low.

In its appeal, the United States seized upon a single reference made by the Federal Circuit in *Hughes VII* to the "invention as a whole." *See* 717 F.2d at 1364 (Pet. App. 125a). This reference, which preceded the court's specific analysis of the disputed claim elements, was alleged to be inconsistent with the element-by-element analysis required by *Pennwalt*. In rejecting this argument, the Federal Circuit noted that the *Hughes VII* court had, consistent with *Pennwalt*, "considered each claim limitation not literally found in the S/E spacecraft" and had concluded that "there was an equivalent for each claim limitation not literally met." *Hughes Aircraft Co. v. United States*, 86 F.3d 1566, 1576 (Fed. Cir. 1996) ("*Hughes XIII*") (Pet. App. 190a). The trial court judgment, including the amount of the damages awarded to Hughes, was affirmed.

After its suggestion for rehearing *en banc* was denied, the United States petitioned for *certiorari*, urging the Court to hold the case pending its disposition of *Warner-Jenkinson*, which seemed likely to address both the doctrine of equivalents and the issue of prosecution history estoppel.

G. The Decision in *Warner-Jenkinson*.

Warner-Jenkinson involved a claim that a patent on a purification process for dyes had been infringed. An earlier patented process had described an ultrafiltration process for dyes at pH levels above 9.0. The patent claim in question had been limited during prosecution to pH levels between 6.0 and 9.0, in order to distinguish it from that existing process. The process that was alleged to be infringing this patent operated at a pH level of 5.0. Although there was no literal infringement, the Federal Circuit had affirmed a jury verdict finding infringement based on the doctrine of equivalents. *See* 520 U.S. at 21-23. The Court granted *certiorari* to consider a range of issues involving the continued vitality and application of the doctrine of equivalents.

The Court began by rejecting the broad argument that the doctrine of equivalents had been repealed by implication in Congress' 1952 revision of the patent statutes. *Id.* at 25-28. In an effort to "clarify the proper scope of the doctrine," however, the Court went on to discuss several other issues that are pertinent here. *Id.* at 21. First, the doctrine of equivalents should be applied as an objective inquiry on an element-by-element basis, in accordance with the all-elements rule. *Id.* at 28-30. Second, "prosecution history estoppel" may serve to limit the doctrine of equivalents in situations where the patent claim was amended during the application process, depending on the reasons for the amendment and the purpose for which it was added. *Id.* at 30-34. In particular, "where a change is made to overcome an objection based on prior art," then a court should explore "the reason (right or wrong) for the objection and the manner in which the amendment addressed and avoided

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the objection." *Id.* at 33 n.7. Third, the Court cautioned that application of the doctrine is not limited to equivalents that were known at the time the patent was issued, but must be assessed by comparing an accused element to a claimed element at the time the infringement is alleged to have occurred, thus allowing for the effect of subsequent technological developments. *Id.* at 37. Finally, the Court largely left to the Federal Circuit the task of refining the legal test for analyzing equivalence, which guides "the inquiry as to whether a substitute element matches the function, way, and result of the claimed element." *Id.* at 40.

On the facts of the case before it, the Court recognized that the patent on the dye purification process had been amended to distinguish it from the prior art. The phrase "at a pH from approximately 6.0 to 9.0" had been added to the claim after the patent examiner rejected the originally presented claim, which had lacked this phrase and thus had overlapped with an earlier patent. *Id.* at 32. The Court parsed the added phrase and noted that the reason for the lower limit of 6.0 was not clear from the record, since addition of this lower limit was not necessary to distinguish the existing patent (which operated at a pH level above 9.0). Although the lower limit of 6.0, "by its mere inclusion, became a material *element* of the claim, that did not necessarily preclude the application of the doctrine of equivalents as to that element." *Id.* (emphasis in original). The Court thus remanded for further consideration of whether the doctrine of equivalents would support the claim of infringement. *Id.* at 34.

H. The Proceedings on Remand in This Case.

After the decision came down in *Warner-Jenkinson*, the Court issued an order in this case that granted the petition for *certiorari*, vacated *Hughes XIII*, and remanded for the Federal Circuit to reconsider its decision in light of this new authority. *United States v. Hughes Aircraft Co.*, 117 S. Ct. 1466 (1997) (Pet. App. 210a).

On remand, the Federal Circuit ordered supplemental briefing and heard additional argument about the application of *Warner-Jenkinson* to the facts of this case. In a unanimous decision, the court held—for the third time—that the Government was liable for infringing the Williams patent under the doctrine of equivalents. *Hughes Aircraft Co. v. United States*, 140 F.3d 1470 (Fed. Cir. 1998) ("*Hughes XV*") (Pet. App. 1a-15a).

The court first held that "the analysis performed in *Hughes VII* satisfies the all-elements rule as stated in *Warner-Jenkinson*." *Hughes XV*, 140 F.3d at 1475 (Pet. App. 8a). *Warner-Jenkinson* had endorsed the same formulation of this rule that the Federal Circuit had adopted in *Pennwalt*, which states that the complaining party "must show the presence of every element or its substantial equivalent in the accused device." *Id.* at 1474 (Pet. App. 7a) (quoting *Pennwalt*, 833 F.2d at 935) (internal quotation omitted). Following the teaching of *Warner-Jenkinson*, the court reexamined in some detail its analysis from *Hughes XIII* that *Hughes VII* had applied this rule correctly. Once again, the court focused specifically on the equivalence of the individual claim elements contained in claim paragraphs (e), (f), and (g) of the Williams patent, which were not literally present in the accused S/E satellites but which performed the same function, in the same way, to obtain the same result. *Hughes XV*, 140 F.3d at 1475 (Pet. App. 8a).

The *Hughes XV* court then turned to the Government's contention that under *Warner-Jenkinson*, prosecution history estoppel creates an absolute bar to the application of the doctrine of equivalents for any claim element that was added by amendment "to overcome a patentability rejection." *Id.* at 1476 (Pet. App. 11a). In the Government's view, the fact that claim paragraphs (e), (f), and (g) had been added by amendment during the patent application process in response to the McLean prior art automatically meant that Hughes was strictly limited

to the literal scope of those claim paragraphs and was not entitled to assert *any* equivalents to *any* of the elements contained in those paragraphs. *Id.*

The Federal Circuit held that *Warner-Jenkinson* did not require the "wooden approach" advocated by the Government. *Id.* (Pet. App. 12a). Instead, the court read *Warner-Jenkinson* as remaining faithful to this Court's longstanding precedent that "the key to prosecution history estoppel is the surrender or disclaimer of subject matter by the patentee." *Id.* The Federal Circuit further noted and stressed this Court's observation in *Warner-Jenkinson* that in cases where a patent application is amended to distinguish the prior art, it is "'permissible for a court to explore'" the reason "'for the objection and the manner in which the amendment addressed and avoided the rejection.'" *Hughes XV*, 140 F.3d at 1476 (Pet. App. 13a) (quoting *Warner-Jenkinson*, 520 U.S. at 33 n.7). Consistent with that approach, the Federal Circuit held that "[i]n evaluating the reason behind an amendment, a court must determine what subject matter the patentee actually surrendered" before determining the extent to which the patentee is estopped from asserting equivalents. *Id.*

Applying this analysis, the Federal Circuit concluded that Hughes' claim amendments had not resulted in the surrender of "subject matter covering a device, such as the accused device, which provides two-way communication with an external location (although some calculations are made onboard instead of at the external location) and which uses an external coordinate system." *Id.* at 1477 (Pet. App. 14a). Thus, although the claim amendments did "serve to narrow the range of equivalents," they did not "preclude all equivalents available to Hughes." *Id.* As we shall discuss, the Federal Circuit's analysis is fully consistent with *Warner-Jenkinson.*

REASONS FOR DENYING THE WRIT

After 25 years of protracted litigation, resulting in 16 separate judicial decisions, the United States has now requested *certiorari* on two issues: (1) whether the Federal Circuit has intentionally disregarded the Court's precedent in *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17 (1997); and (2) whether the Federal Circuit misapplied that precedent to the facts of this case. Neither contention can be sustained. In this case, in the other cases GVRed after *Warner-Jenkinson*, and in the half dozen cases that have been decided since, it is clear that the Federal Circuit is working steadily to apply the Court's new guidance on the doctrine of equivalents to the fact-specific claims presented in each of these cases.

No reason exists for the Court to review this case—the first to return to the Court since *Warner-Jenkinson* thoroughly canvassed this area of patent law just two Terms ago—in the absence of a compelling justification for "micromanaging" the Federal Circuit's consideration of these issues in "the orderly course of case-by-case determinations." *Id.* at 40. If any such justification were to develop in the future, the regular flow of cases addressing these issues no doubt will provide the Court with ample opportunity to revisit this specialized area of the law and set the record straight. In the meantime, however, this petition reflects nothing more than the Government's disagreement with the application of the governing law to the particular facts of this case. It should therefore be denied.

A. The Federal Circuit Correctly Applied the *Warner-Jenkinson* Decision in This Case.

The petition for *certiorari* is premised on the claim that the Federal Circuit is either ignoring or misapplying *Warner-Jenkinson* in this and other cases. Yet the court below squarely applied the Court's teachings here. Indeed, after receiving the remand order, the Federal Circuit ordered supplemental briefing and heard additional argument directed to the proper

application of *Warner-Jenkinson* to the facts of this case, which was the sole focus on remand. *See Hughes XV*, 140 F.3d at 1472 (Pet. App. 1a-2a) (issue on remand is whether *Hughes VII* "satisfies the legal requirements announced in *Warner-Jenkinson*"); *id.* at 1477 (Pet. App. 15a) (same).

1. The Federal Circuit Did Not Neglect the "All Elements Rule."

More particularly, the United States continues to argue that the Federal Circuit improperly applied an "invention as a whole" test rather than the required element-by-element analysis to the facts underlying Hughes' claim for infringement. *See* Pet. 16-18. This argument has been considered and rejected three times now: by the panel in *Hughes VII*, 717 F.2d at 1364-66 (Pet. App. 125a); by the panel in *Hughes XIII*, 86 F.3d at 1576 (Pet. App. 190a); and by the panel in *Hughes XV*, 140 F.3d at 1475 (Pet. App. 8a). On each occasion, the full court denied rehearing *en banc*.

The Government's claim indeed lacks merit. Beginning in *Hughes VII*, and continuing in its later decisions, the Federal Circuit clearly analyzed equivalence in the context of the particular claim limitations that were not literally met by the accused S/E spacecraft. *See* 717 F.2d at 1364-66 (Pet. App. 124a-130a). With respect to the limitations set forth in claim paragraph (e), the court noted that the S/E satellite's ability to retain information about its ISA position by storing it in a computer located on board the satellite, while transmitting sufficient information to the ground crew to enable them to use that information, was the "modern-day equivalent of providing an indication of ISA to ground as taught by Williams." *Id.* at 1365 (Pet. App. 128a); *see also Hughes XIII*, 86 F.3d at 1575-76 (Pet. App. 187a-188a); *Hughes XV*, 140 F.3d at 1475 (Pet. App. 8a). All the same information is collected and processed by both types of satellite. The only difference is that modern computer technology permits some of this information to be stored and used on the S/E satellite itself. *See Hughes VII*, 717

F.2d at 1365 (Pet. App. 128a) ("Advanced computers and digital communications techniques developed since Williams permit doing on-board a *part* of what Williams taught as done on the ground.") (emphasis in original).

With respect to the specific synchronization limitations of claim paragraphs (f) and (g) that are not literally present in the S/E satellites, the Federal Circuit noted that both Williams and the S/E satellites transmit information relating to sun angle and spin rate from which the ground crew can determine the satellite's present orientation, its desired orientation, and precisely where in the spin cycle the jet must be pulsed and for how long. *Id.* at 1365-66 (Pet. App. 129a). The court also noted that both devices use the sun pulses generated by the sun sensor in the same way for the same purpose—to time the firing of the jet at the proper location in the spin cycle. *Id.*

The court therefore held that the differences in operation between Williams (which uses an analog device to time the jet-firing commands) and the S/E satellites (which instead use a more modern digital computer that was not available in 1960) are insignificant differences resulting from the use of more modern computer technology. They amount to no more than "relocating the function, making no change in the function performed, or in the basic manner of operation, or in the result obtained." *Id.* at 1366 (Pet. App. 130a); *see also Hughes XIII*, 86 F.3d at 1575-76 (Pet. App. 187a-188a); *Hughes XV*, 140 F.3d at 1475 (Pet. App. 8a-9a).[3] This is precisely the element-

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[3] The United States bases much of its argument on Judge Nies' dissent in *Hughes XIII* which in turn was based on Judge Davis' dissent in *Hughes VII*. Judge Davis' view was grounded upon the erroneous premise that "[t]he gist of Williams was that [the jet firing] function was to be performed primarily by the ground location acting externally to the spacecraft on the basis of an indication of ISA transmitted to that location." *Hughes VII*, 717 F.2d at 1367-68 (Davis, J., dissenting) (Pet. App. 134a); *see* Pet. 17-18. Yet in an important decision that the Government has never challenged and

(continued...)

by-element analysis required by *Warner-Jenkinson*. The Government merely disagrees with the application of this settled law to the facts of this case.

2. The Federal Circuit Did Not Misapply the Doctrine of Prosecution History Estoppel.

The United States also contends that the Federal Circuit erred in applying prosecution history estoppel to the facts of this case. *See* Pet. 18-21. The gist of this argument is over whether Hughes did in fact surrender subject matter that encompasses the accused S/E satellites.

The Government's position is without merit for several reasons. Most notably, it mistakenly lumps together all of the elements stated in claim paragraphs (e), (f), and (g) and treats them as the same. In fact, however, these paragraphs contain more than three elements (or claim limitations), the bulk of which are literally met by the S/E satellites. The claim paragraph in *Warner-Jenkinson* likewise was interpreted by the Court to include more than one element: one concerning the upper pH limit and the other concerning the lower pH limit. *See* 520 U.S. at 32-34. Each claim limitation must be analyzed separately under both the doctrines of equivalents and prosecution history estoppel.

The Government also calls these claim paragraphs "[t]he three elements that respondent claimed as essential factors to distinguish the McLean patent." Pet. at 20. This argument is wrong because it fails to recognize that the particular limitations contained in these three claim paragraphs that are in

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[3] (...continued)
which remains the law of this case, the Court of Claims held that Williams' ground control device is not included in the claims. *Hughes Aircraft Co. v. United States*, 640 F.2d 1193, 1195-97 (Ct. Cl. 1980) ("*Hughes V*"). Thus, Hughes was not required to prove that the Government's ground-based digital computer is equivalent to Williams' analog device—the essence of the dissent's argument rejected in *Hughes VII*.

dispute for purposes of equivalents were *not* essential to distinguish McLean. Indeed, only two elements in these paragraphs were actually necessary to distinguish McLean: an "indication of the orientation of the spin axis within a fixed external coordinate system" and a means for receiving control signals to activate the precession jet. These elements are literally contained in the S/E satellites. *Hughes VI*, 215 U.S.P.Q. at 804 (Pet. App. 59a); *see also id.* at 800-803 (Pet. App. 48a-56a); *Hughes VII*, 717 F.2d at 1355-56 (Pet. App. 105a-106a).

After carefully analyzing the different elements contained in these three paragraphs, the Federal Circuit has repeatedly held that Hughes did not "surrender" a claim scope that would include the S/E satellites as equivalents. *Id.* at 1360-66 (Pet. App. 115a-130a); *Hughes XV*, 140 F.3d at 1477 (Pet. App. 13a-14a). This application of the law is consistent with *Warner-Jenkinson*, which proceeded in exactly the same manner by dividing the amended claim language into two distinct elements—a lower pH limit of 6.0 and an upper pH limit of 9.0—and separately analyzing whether each of these elements was essential to distinguish the prior art. *See* 520 U.S. at 32-34. The Court specifically noted that the 6.0 pH limitation "certainly did not serve to distinguish the [prior art], which said nothing about pH levels below 6.0," and thus, although material, its inclusion in the amendment "did not necessarily preclude the application of the doctrine of equivalents as to that element." *Id.* at 32.

Although not directly addressed in the opinion below, there is another important reason why the Federal Circuit correctly decided these issues under *Warner-Jenkinson*. Part of the Court's holding in that decision was that the doctrine of equivalents is not limited only to equivalents that were known at the time the patent was issued, but must be assessed by comparing an accused element to a claimed element at the time the infringement is alleged to have occurred. 520 U.S. at 37.

This may be many years after the patented invention was conceived, and may encompass technologies that, although developed long afterwards and thus unknown to the original inventor, do not work any material change in the elements of the patented device. *Id.* The decision in *Hughes VII* relied on this well-settled proposition of law in recognizing that the S/E satellites simply employed "modern day" computer technology that made it unnecessary to construct the invention in precisely the same manner conceived by Williams using older and more rudimentary technology. *Hughes VII*, 717 F.2d at 1364 (Pet. App. 125a) ("In following Williams' teachings, the government merely employed a modern day computer to do indirectly what Williams taught it to do directly"); *see also Hughes XV*, 140 F.3d at 1475 (Pet. App. 9a). At bottom, the Government's argument depends on the incongruous premise that—despite the fundamental underpinnings of prosecution history estoppel in notions of "surrender," "abandonment" and "disclaimer," *see, e.g., Exhibit Supply Co. v. Ace Patents Corp.*, 315 U.S. 126, 136-37 (1942)—Hughes intentionally surrendered subject matter that it could not know and could not foresee.

In sum, the only claim limitations not literally met by the accused S/E spacecraft—sending the ISA indication to the ground crew and pulsing the jets in synchronism with the command signal—like the 6.0 pH limitation in *Warner-Jenkinson*, were not related to distinguishing the prior art. Hence, the Federal Circuit concluded that the conditions which would bar the doctrine of equivalents are absent in this case: "Williams' amendments thus did not surrender subject matter covering a device, such as the accused device, which provides two-way communication with an external location (although some calculations are made onboard instead of at the external location) and which uses an external coordinate system." *Hughes XV*, 140 F.3d at 1477 (Pet. App. 14a). This conclusion

is correct and is fully consistent with the Court's holding in *Warner-Jenkinson*.[4]

In support of its assertion that the Federal Circuit "express[ly] reject[ed] the Court's directions respecting the application of prosecution history estoppel," Pet. 13, the Government places primary reliance on one passage from *Warner-Jenkinson* in which the Court spelled out the consequences of its newly-minted presumption that now applies where the reason for an amendment to a patent claim cannot be established from the record. *See* Pet. 13 (quoting *Warner-Jenkinson*, 520 U.S. at 33). From that passage, the Government argues that whenever the language of a patent claim is amended for a substantial reason related to patentability, an absolute bar exists to the application of *any* equivalents as to the claim amendments. *See* Pet. at 13-14. The same point was made by Judge Clevenger in dissenting from denial of rehearing *en banc*, where he embraced the Government's argument that in *Warner-Jenkinson* the Court held, "in blunt and clear words," that "if a claim is amended during prosecution to secure a patent, then the patentee cannot assert the doctrine of equivalents as to the amended claim limitation." *Hughes Aircraft Co. v. United States*, 148 F.3d 1384, 1385 (Fed. Cir. 1998) (Clevenger, J., dissenting from denial of rehearing *en banc*) (Pet. App. 212a).

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[4] The Court remanded in *Warner-Jenkinson* because the record did not "reveal the reason for including the lower pH limit of 6.0." 520 U.S. at 33. In this context, the Court announced a "presumption" that where the patentee cannot establish the reason for an amendment which creates a new element of a claim, resort to the doctrine of equivalents is barred as to that element. *Id.* That presumption does not apply here because this is not a case where the record is unclear. To the contrary, the Federal Circuit exhaustively analyzed the prosecution of the Williams patent in *Hughes VII*, 717 F.2d at 1352-60 (Pet. App. 100a-117a), and *Hughes XV*, 140 F.3d at 1475-77 (Pet. App. 10a-15a). These two panels, fifteen years apart, reviewed the same evidence and came to the same conclusion: in the circumstances of this case, prosecution history estoppel did not negate infringement under the doctrine of equivalents.

The Federal Circuit examined the very same passage and correctly concluded that it was not intended to impose such an absolute bar. *Hughes XV*, 140 F.3d at 1476 (Pet. App. 15a). Indeed, in *Warner-Jenkinson* the Court had considered and rejected the argument that "any surrender of subject matter during patent prosecution, regardless of the reason for such surrender, precludes recapturing any part of the subject matter, even if it is equivalent to the matter expressly claimed," commenting that it "reaches too far." 520 U.S. at 30. The Court did so even though it recognized that the proposed rule had the advantage of defining a "brighter line." *Id.* at 32 n.6.

The approach urged by the Government is contrary to how the Court handled the facts before it in *Warner-Jenkinson*.[5] The Court's decision makes clear that it understood that a single "amendment" to a patent claim may add multiple separate claim "elements," each of which may have a different purpose and each of which may have a different effect. Each added element must thus be separately analyzed to determine whether and to what extent subject matter was surrendered and thus to what extent prosecution history estoppel applies. *See* 520 U.S. at 31-33.[6]

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[5] The Court has long admonished that it does not intend for lower courts to take general expressions contained in its opinions and apply them outside of the context in which they were made. *See, e.g., Kokkonen v. Guardian Life Ins. Co.*, 511 U.S. 375, 379 (1994) ("It is to the holdings of our cases, rather than their dicta, that we must attend . . . .").

[6] The Court began its discussion of these issues by citing the Federal Circuit' decision in *Bayer AG v. Duphar Int'l Research B.V.*, 738 F.2d 1237 (Fed. Cir. 1984), as an example of the "well-established" rule of prosecution history estoppel. *Warner-Jenkinson*, 520 U.S. at 30. Tellingly, *Bayer* quotes the statements in *Hughes VII* that reject as "wooden" the notion that "virtually any amendment of the claims creates a 'file wrapper estoppel' effective to bar all resort to the doctrine of equivalents, and to confine [the] patentee 'strictly to the letter of the limited claims granted.'" *Bayer*, 738 F.2d at 1242-43 (quoting *Hughes VII*, 717 F.2d at 1362).

That is how the Court dealt with the added phrase "'at a pH from approximately 6.0 to 9.0.'" *Id.* at 32. This single *amendment* was clearly made for "a substantial reason related to patentability," in order to overcome the examiner's rejection based on the prior art. *Id.* Significantly, however, the Court treated it as adding two separate claim *limitations*, each of which might have been added for a different purpose and might or might not have been necessary or intended to distinguish the prior art. It therefore instructed the lower courts on remand to explore the reason "for the objection and the manner in which the amendment addressed and avoided the objection," considering each element separately. The Court did not—as it would have if the Government's view were correct—simply "preclude the application of the doctrine of equivalents as to that element." *Id.* at 32-33 & n.7. The Court's separate treatment of each limitation contained in the amendment is consistent with its admonitions in the remainder of the opinion that each claim limitation is material for purposes of the infringement analysis. *See id.* at 29, 40 (emphasizing the importance of each individual claim element).[7]

Had the Court intended to bar all resort to the doctrine of equivalents for any amendment to a patent claim that is made following a rejection based on the prior art, it would have had no reason to treat the 6.0 pH limitation any differently from the 9.0 pH limitation. Instead, it would simply have ended its discussion with the statement that application of the doctrine of

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[7] This approach is also consistent with the well-understood meaning of the all-elements rule that is employed by the Federal Circuit. *See Corning Glass Works v. Sumitomo Elec. U.S.A.*, 868 F.2d 1251, 1259 (Fed. Cir. 1989) (Nies, J.) (explaining that "element" in the sense of the all-elements rule means an individual claim "limitation").

equivalents was barred as to ultrafiltration processes operating at any pH below 6.0 or above 9.0.[8]

The Federal Circuit has noted that the position urged by the Government would in effect "bar any equivalents whatsoever to the vast majority" of patents, which are commonly amended during patent prosecution. *Litton Sys., Inc. v. Honeywell, Inc.*, 140 F.3d 1449, 1455 (Fed. Cir. 1998) (Pet. App. 223a). The Federal Circuit has adopted instead the more reasonable view that *Warner-Jenkinson* "adhered to the longstanding doctrine that an estoppel only bars recapture of that subject matter actually surrendered during prosecution. The common practice of amending a claim during prosecution, even amending to overcome prior art, does not necessarily surrender all subject matter beyond the literal scope of the amended claim limitation." *Id.*

All of this comports well with the Court's stated purpose of preserving the "flexible rule of estoppel" that has long existed in the law. *Warner-Jenkinson*, 520 U.S. at 32 n.6. Consistent with that purpose, this Court pointed out in *Warner-Jenkinson* that prosecution history estoppel is to be applied "only where the claims have been amended for a limited set of reasons," 520 U.S. at 32, and noted that estoppel has been applied "where the allegedly infringing equivalent element was outside of the revised claims *and within the prior art that formed the basis for the rejection of the earlier claims*." 520 U.S. at 31 (citing *Keystone Driller Co. v. Northwest Eng'g Corp.*, 294 U.S. 42 (1935) (emphasis added; internal citations omitted)). This is exactly the rule the Federal Circuit applied

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[8] In fact, the Government is somewhat equivocal in urging its theory of an absolute bar to equivalents in recognition of its earlier arguments to the Court in *Warner-Jenkinson* that "even if the doctrine of equivalents is unavailable, the patentee should still be protected against merely colorable or trivial deviation from the precise language of the claims." Pet. 15 n.4. That fact situation—a mere colorable or trivial deviation from the claim language—is precisely how the Federal Circuit viewed the case at bar.

in this case and, as we now discuss, is exactly the rule it has been applying in its other post-*Warner-Jenkinson* decisions.

B. The Federal Circuit Is Faithfully Applying the Court's Teachings in *Warner-Jenkinson*.

The relationship between the doctrines of equivalents and prosecution history estoppel was thoroughly explored in *Warner-Jenkinson*. This case is the first to come back to this Court following that decision just two Terms ago. The Federal Circuit is currently embarked on the "orderly course of case-by-case determinations" of the doctrine of equivalents envisioned in *Warner-Jenkinson*, which will require that court to "refine the formulation of the test for equivalence." 520 U.S. at 40. In the petition for *certiorari*, the United States seeks to pretermit this sensible process by boldly stating that the Federal Circuit is demonstrating its "express rejection of the Court's directions" in *Warner-Jenkinson*. Pet. 13. Nothing in the Federal Circuit's treatment of these cases justifies this description.

The Federal Circuit's handling of the cases that were remanded for further proceedings in the wake of the decision in *Warner-Jenkinson* does not show any intransigence or stubborn resistance to this binding precedent. In this case, as discussed above, the Federal Circuit on remand applied the Court's teachings to determine that *Hughes VII* and *Hughes XIII* had been correctly decided on the particular facts presented here. The court's analysis included a careful element-by-element analysis of equivalence and a detailed consideration of how the Williams patent was prosecuted in order to determine whether prosecution history estoppel should apply. *Hughes XV*, 140 F.3d at 1474-77 (Pet. App. 7a-15a).

In two other cases that were remanded after *Warner-Jenkinson*, the Federal Circuit reversed its previous holdings in light of this new precedent. In *Warner-Jenkinson* itself, where the Federal Circuit had previously affirmed a jury finding of

infringement, the court remanded the case for further factual analysis by the trial court to determine whether the patentee could establish the reason for the amendment to its patent claim that placed a lower pH limit of 6.0 on the ultrafiltration process. *See Hilton Davis Chem. Co. v. Warner-Jenkinson Co.*, 114 F.3d 1161, 1163 (Fed. Cir. 1997). After recounting the Court's teachings accurately and completely, the Federal Circuit declined for the time being to "specify the procedures" that trial courts should employ to conduct the inquiry "posed by the newly created presumption" laid down in *Warner-Jenkinson*. *Id.*

The Federal Circuit also reversed its previous ruling in another case, which concerned a patented process of forming precision mirrors contained in gyroscopes used for aircraft navigation. *Litton*, 140 F.3d at 1463-64 (Pet. App. 243a-244a). In the first round of appeals, the court had sustained a jury verdict that found infringement of the patent based on the doctrine of equivalents, and ordered a new trial on damages only. *See Litton Sys., Inc. v. Honeywell, Inc.*, 87 F.3d 1559 (Fed. Cir. 1996). This judgment was vacated by the Court's GVR order after *Warner-Jenkinson*, and the case was remanded for further consideration. *Honeywell, Inc. v. Litton Sys., Inc.*, 117 S. Ct. 1040 (1997). On remand, the Federal Circuit revisited its earlier analysis and concluded that the jury "based its finding of infringement under the doctrine of equivalents on an erroneous claim construction" that affected its verdict under the proper "element-by-element" analysis. *Id.*, 140 F.3d at 1454-55 (Pet. App. 221a). The court therefore vacated the jury's verdict on infringement and remanded to give the trial court the opportunity to consider from the record whether either prosecution history estoppel or the prior art precluded infringement under the doctrine of equivalents. *Id.* at 1455 (Pet. App. 222a). In particular, the Federal Circuit directed the trial court to explore whether the accused equivalent was only

a trivial variation of the prior art that had been distinguished by amendment during prosecution. *Id.* at 1463-64 (Pet. App. 243a).

In addition to the fact-sensitive approach that the Federal Circuit has taken to deciding the cases that were remanded after *Warner-Jenkinson*,[9] the few new cases that have since been decided suggest that the Court's precedent is well understood and is being routinely applied by the Federal Circuit. *See, e.g.*, *Spectrum Int'l, Inc. v. Sterilite Corp.*, 49 U.S.P.Q.2d 1065, 1998 WL 854715, at *3, *8 (Fed. Cir. Dec. 9, 1998); *Insituform Tech., Inc. v. CAT Contracting, Inc.*, 161 F.3d 688, 691 (Fed. Cir. 1998); *Bai v. L & L Wings, Inc.*, 160 F.3d 1350, 1354-56 (Fed. Cir. 1998); *Desper Prods., Inc. v. QSound Labs, Inc.*, 157 F.3d 1325, 1338-40 (Fed. Cir. 1998); *EMI Group N. Am., Inc. v. Intel Corp.*, 157 F.3d 887, 896-98 (Fed. Cir. 1998); *Laitram Corp. v. Morehouse Indus., Inc.*, 143 F.3d 1456, 1464 (Fed. Cir. 1998).

In each of these more recent cases, the Federal Circuit undertook a careful analysis of the particular factual record before the Patent Office to determine precisely what subject matter was surrendered by the patentee, the reasons for the surrender, and the consequences for the patentee's attempts to assert the doctrine of equivalents. As might be expected, the results have varied with the specific facts and circumstances in the cases. Indeed, this is inevitable given the highly specific factual nature of the record in each case, which includes the particular language used in the claims, the patent prosecution record, the details of the prior art, and the nature of the product accused of patent infringement.

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[9] In addition to its GVR orders in this case, *Litton*, and *Warner-Jenkinson*, the Court also GVRed a fourth case, *Shoketsu Kinzoku K.K., Ltd. v. Festo Corp.*, 117 S. Ct. 1240 (1997), which remains pending before the Federal Circuit.

The different results reached in these cases are not the product of any uncertainty or inconsistency in the application of the law as set forth by this Court in *Warner-Jenkinson*. For example, where the record has clearly established that the patentee "surrendered subject matter that includes the specific technique employed in the accused . . . device," the Federal Circuit has applied prosecution history estoppel to bar the application of the doctrine of equivalents. *Desper Prods.*, 157 F.3d at 1339. In conformity with *Warner-Jenkinson*, however, the Federal Circuit has consistently held that the mere fact that an amendment was made following a prior art rejection does not end the inquiry. *See, e.g., Desper Prods.*, 157 F.3d at 1338-39; *EMI Group*, 157 F.3d at 897-98; *see also Warner-Jenkinson*, 520 U.S. at 30-33 & n.7. In each case, the court has thus embarked on a more sophisticated and nuanced analysis of the facts. *See, e.g., EMI Group*, 157 F.3d at 898 ("Cancellation of a claim that is written broadly does not always generate an estoppel to narrower subject matter. The particular facts must be considered.").

Where, as in this case, the record indicates that some subject matter was surrendered to distinguish the prior art, but not the subject matter of the alleged equivalent, the Federal Circuit has upheld findings of infringement based on the doctrine of equivalents. *See, e.g., Insituform Tech.*, 161 F.3d at 691 (surrender of subject matter related to the use of a large compressor as found in the prior art did not preclude equivalents to a separate claim limitation involving a single vacuum source). As the Federal Circuit has recently explained:

> In a great variety of situations the courts have applied the criteria of equivalency to the particular facts, sometimes finding equivalency and sometimes not. The doctrine of equivalents seeks to establish a just balance between the purpose of the claims to define and give notice of what is patented, and the judicial responsibility to avoid a "fraud on the

> patent" based on insubstantial changes from the patented invention.

YBM Magnex, Inc. v. ITC, 145 F.3d 1317, 1322 (Fed. Cir. 1998).

Indeed, it is telling that five of the six new cases decided by the Federal Circuit since *Warner-Jenkinson* have applied the Court's teachings on prosecution history estoppel to bar a finding of infringement based on the doctrine of equivalents. *See Spectrum Int'l*, 1998 WL 854715 at *8; *Bai*, 160 F.3d at 1356; *EMI Group*, 157 F.3d at 897-98; *Desper Prods.*, 157 F.3d at 1339-40; *Laitram Corp.*, 143 F.3d at 1460-64. These decisions represent a significant narrowing of the doctrine of equivalents, a narrowing that accords with the Court's teachings in *Warner-Jenkinson*, and a narrowing that no doubt will continue to proceed "in the orderly course of case-by-case determinations" that was envisioned by this Court. 520 U.S. at 40.

Nothing in the Federal Circuit's recent cases indicates that it is ignoring or misapplying the Court's precedent. Accordingly there is no reason for the Court to intervene again in this area so soon after *Warner-Jenkinson*. Rather, the better course is to allow the Federal Circuit to continue to apply the guidance given by this Court to the specific facts of the cases as they arise, as indeed was expressly contemplated in *Warner-Jenkinson*. If an important doctrinal instability were to become apparent in the future, there will be ample opportunity for the Court to correct it in some later case.

C. The Claim that the Federal Circuit Engaged in Appellate Fact-Finding Does Not Merit Review.

The remaining argument contained in the petition is that the Federal Circuit improperly resolved factual issues without proper deference to the trial court. *See* Pet. at 21-24. This argument lacks merit, has been raised and rejected repeatedly, and may well be procedurally barred. The Government first

raised the issue in its petition for rehearing following the *Hughes VII* decision in 1983, which was denied. After failing to raise the issue in its 1994 appeal, the Government resurrected it in its petition for rehearing after *Hughes XIII*, which was denied. The Government raised the issue for the third time in 1997 in its supplemental brief on remand after this Court's GVR order. The Federal Circuit declined to consider this argument because it was judged to be outside the scope of the mandate from this Court to reconsider *Hughes XIII* in view of *Warner-Jenkinson*, which did not address this issue. *Hughes XV*, 140 F.3d at 1473 n.2 (Pet. App. 6a). In this somewhat peculiar posture, it is problematic whether the Court could even properly address the issue at this point in this case.

In any event, the Federal Circuit did not engage in any impermissible fact-finding in *Hughes VII*. Rather, it concluded that the trial court had applied an improper *legal* standard by determining that the doctrine of equivalents required "obvious and exact equivalents," which is no different from the test for literal infringement. 717 F.2d at 1364 (Pet. App. 125a); *see also Mas-Hamilton*, 156 F.3d at 1211-12. As the Federal Circuit later explained, the *Hughes VII* court concluded that the trial court had "erred as a matter of law" in applying the "obvious and exact" standard of equivalents. *Hughes XIII*, 86 F.3d at 1576 (Pet. App. 189a). The trial court's error was prompted by its incorrect analysis of the prosecution history, which has long been regarded as a question of law subject to *de novo* review. *See, e.g., Insituform Tech., Inc. v. CAT Contracting, Inc.*, 99 F.3d 1098, 1107 (Fed. Cir. 1996), *cert. denied*, 117 S. Ct. 1555 (1998); *accord Warner-Jenkinson*, 520 U.S. at 39 n.8.

Thus, there was no need for the Federal Circuit to determine that any of the trial court's factual findings were clearly erroneous, and it did not do so. Indeed, there was no factual dispute at trial about the structure and operation of the accused S/E satellites. After setting forth the proper legal

standard, the *Hughes VII* court simply applied that standard to the established facts and concluded that in view of the prosecution history of the Williams patent, Hughes was not barred from asserting that the accused S/E satellites were equivalent. *Hughes VII*, 717 F.2d at 1363-66 (Pet. App. 124a-130a). This conclusion is correct, and it plainly does not warrant review in this case.

CONCLUSION

For the foregoing reasons, the petition should be denied.

Respectfully submitted,

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JANUARY 25, 1999